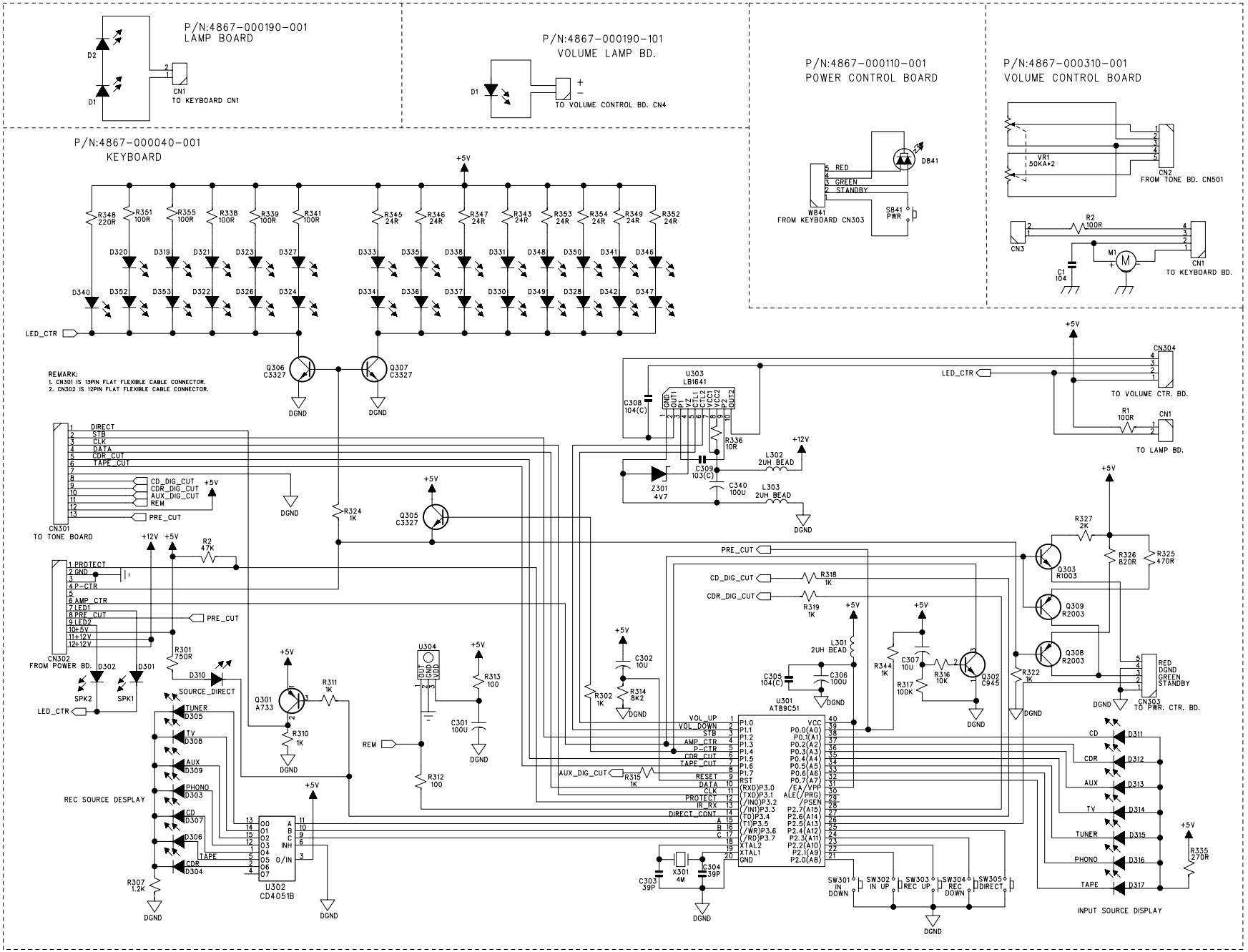
HK670

Integrated Amplifier

Service – Technical Manual

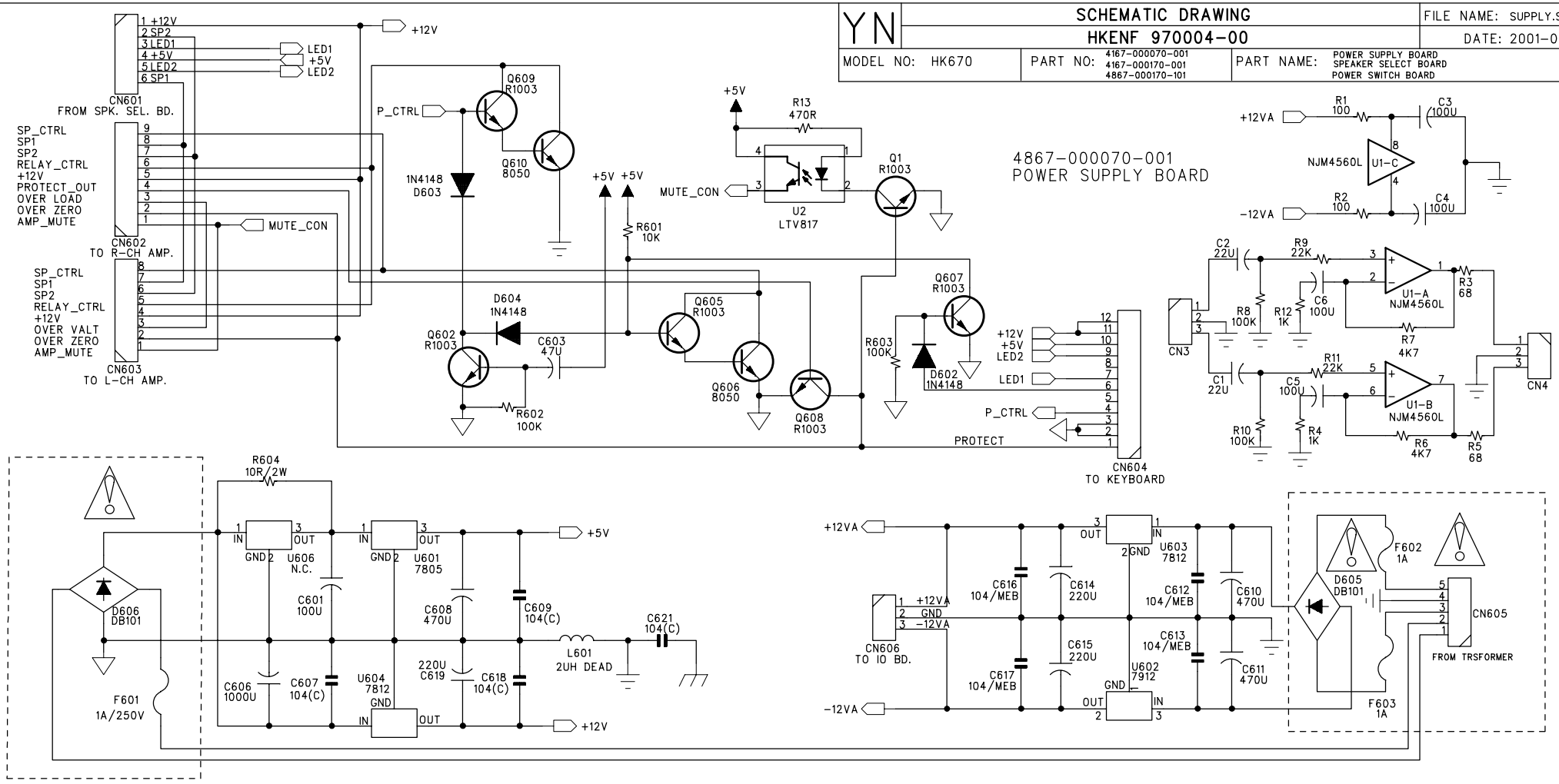
Harman International SNC - Harman Consumer International 2, route de Tours 72500 Château du Loir FRANCE

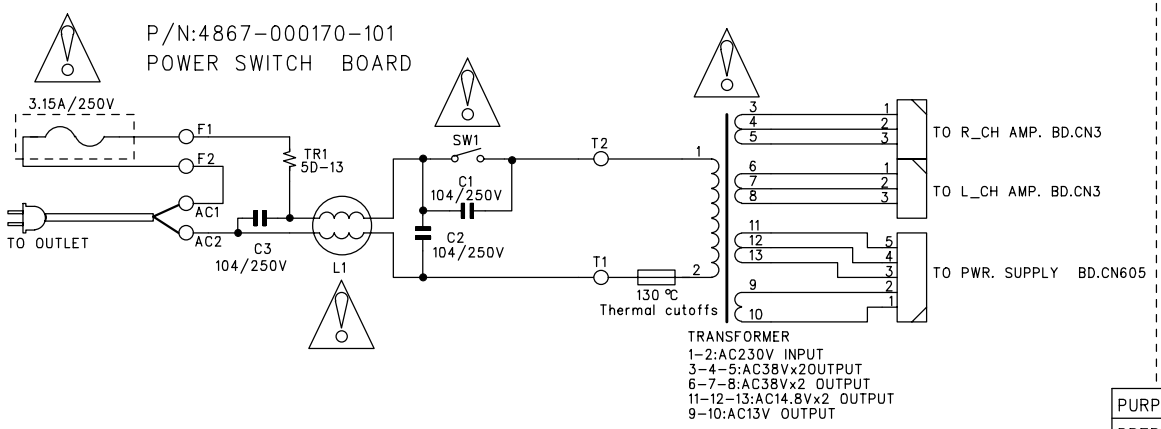
YN	SCHEMATIC DRAWING	FILE NAME: KEYBOARD.SCH
	HKENF 970004-00	DATE: 2001-07-14
MODEL NO: HK670	PART NO: 4867-000040-001 4867-000110-001 4867-000310-001 4867-000190-001 4867-000190-101	PART NAME: KEYBOARD POWER CONTROL BOARD VOLUME CONTROL BOARD LAMP BOARD VOLUME LAMP

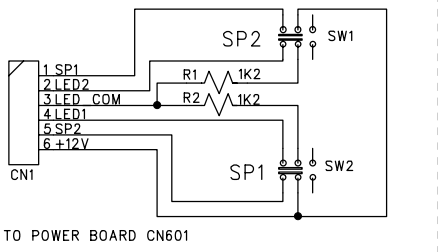


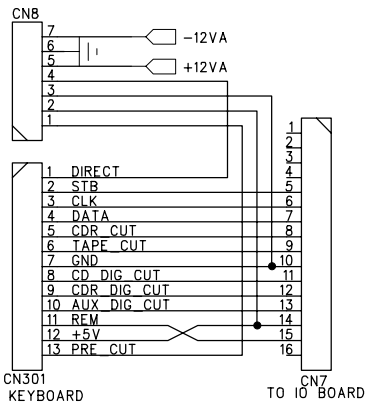
PURPOSE: SAMPLE MAKING	PRODUCTION	SHEET 1 OF 1	REV A
PREPARED BY:	CHECKED BY:	APPROVED BY:	

YN	SCHEMATIC DRAWING	FILE NAME: SUPPLY.SCH
	HKENF 970004-00	DATE: 2001-07-12
MODEL NO: HK670	PART NO: 4167-000070-001 4167-000170-001 4867-000170-101	PART NAME: POWER SUPPLY BOARD SPEAKER SELECT BOARD POWER SWITCH BOARD



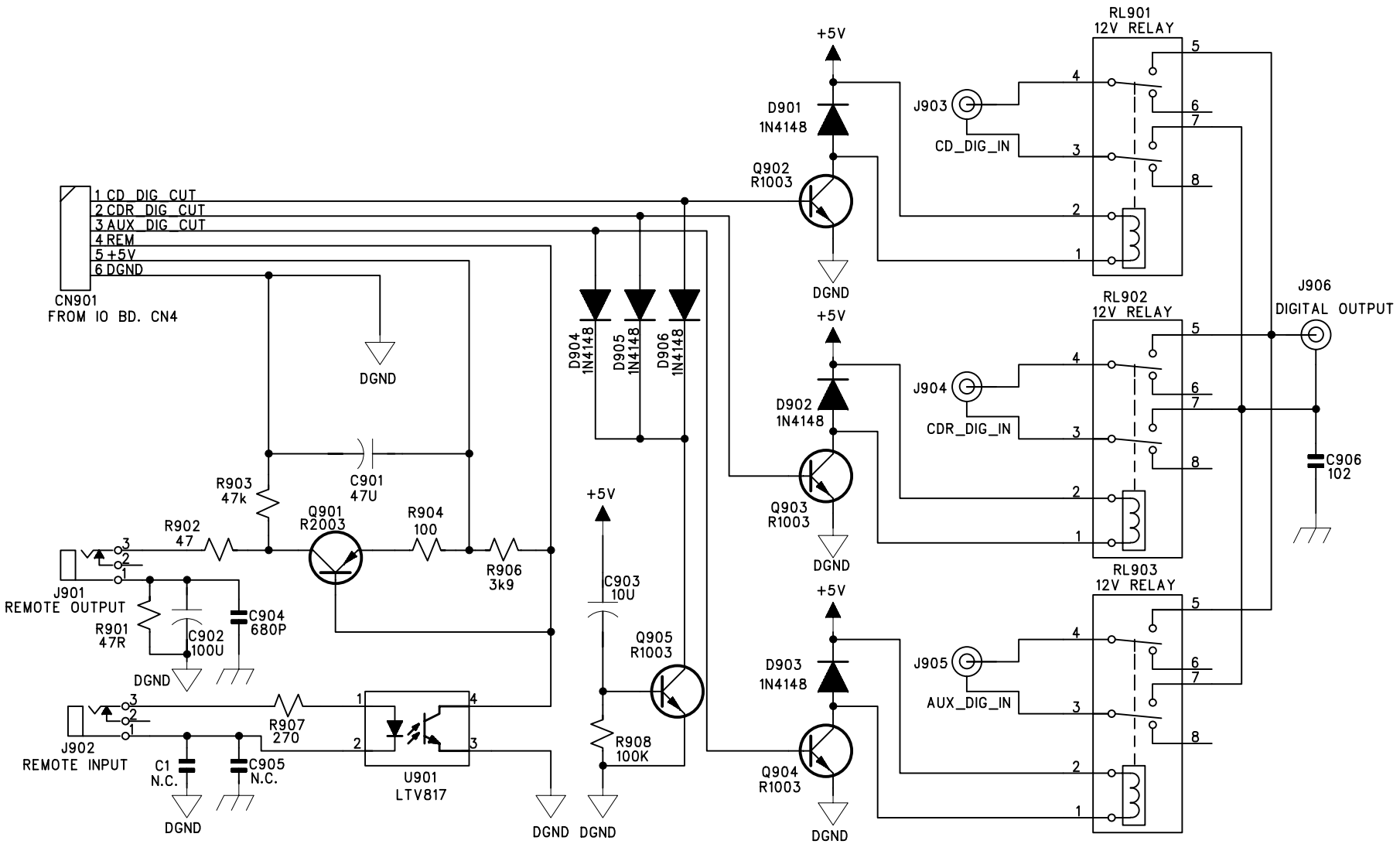






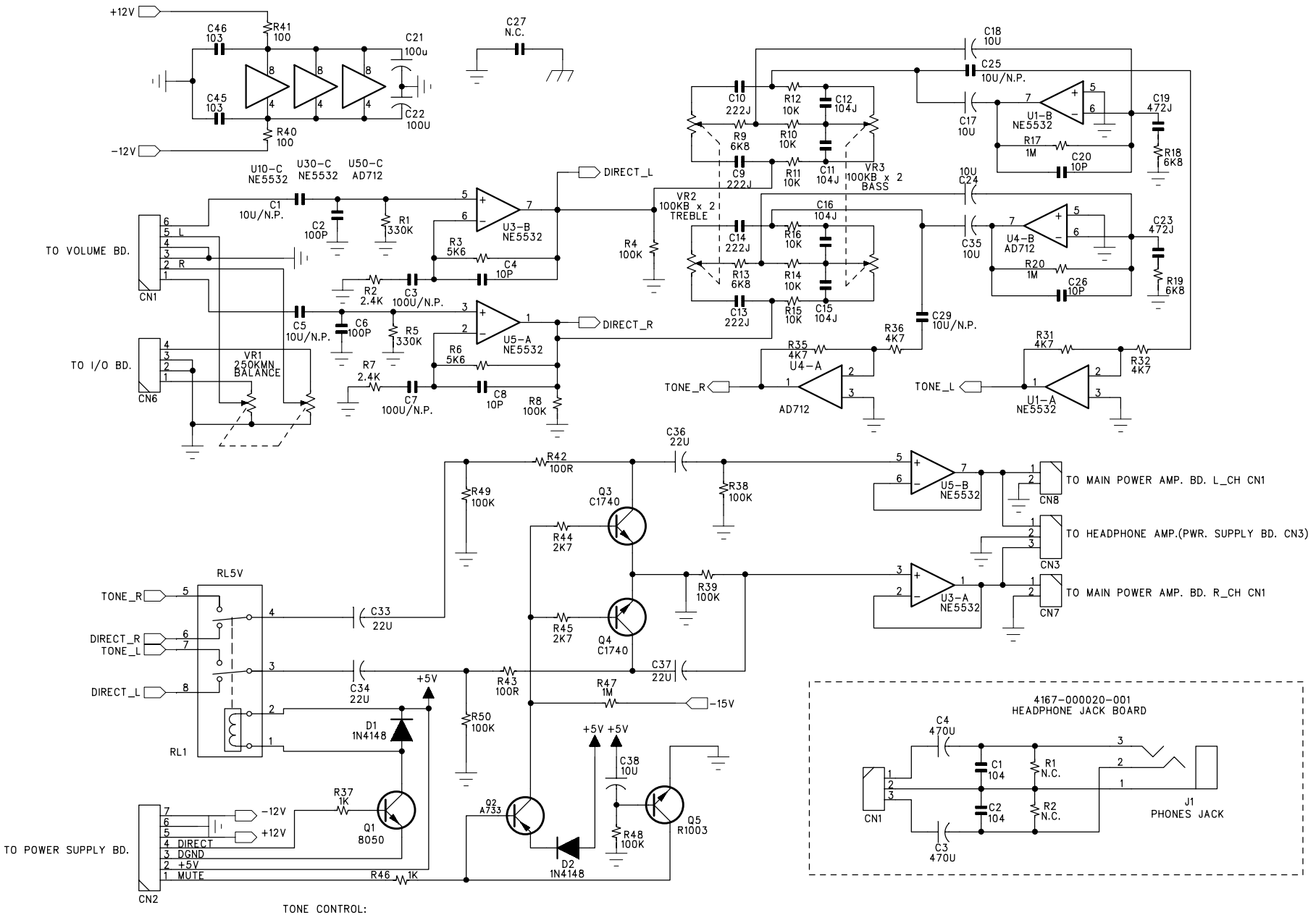
PURPOSE:SAMPLE MAKING	PRODUCTION	SHEET 1 OF 1	REV A
PREPARED BY:	CHECKED BY:	APPROVED BY:	

YN	SCHEMATIC DRAWING	FILE NAME: DIGITAL.SCH
	HKENF 970004-00	DATE: 2001-07-14
MODEL NO: HK670	PART NO: 4867-000290-001	PART NAME: DIGITAL CONTROL BOARD



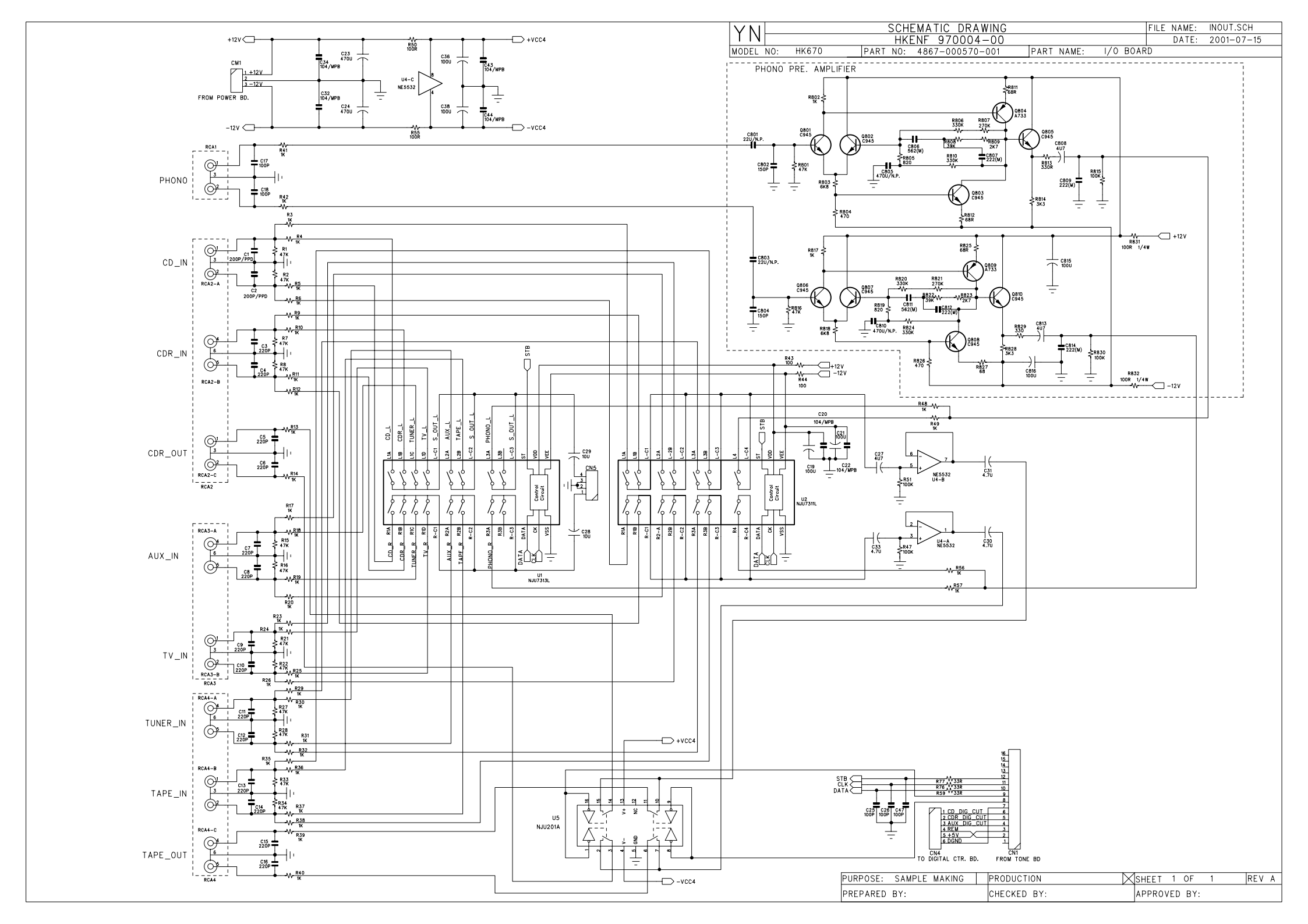
PURPOSE:SAMPLE MAKING		PRODUCTION	☒	SHEET 1 OF 1	REV A
PREPARED BY:		CHECKED BY:		APPROVED BY:	

YN	SCHEMATIC DRAWING	FILE NAME: TONE.SCH
	HKENF 970004-00	DATE: 2001-07-14
MODEL NO: HK670	PART NO: 4167-000120-001 4167-000020-001	PART NAME: TONE CONTROL BOARD HEADPHONE JACK BOARD

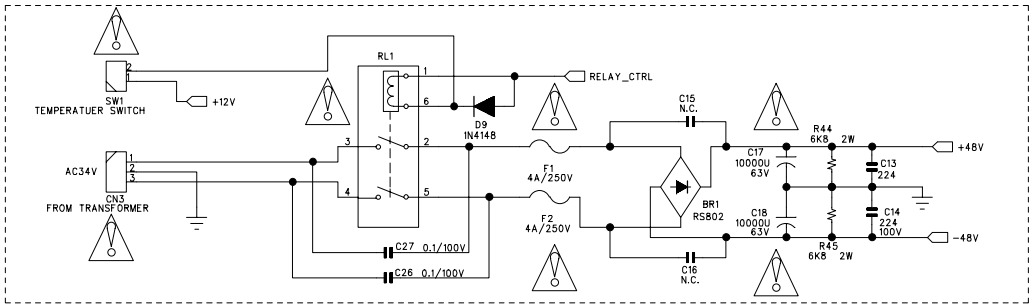


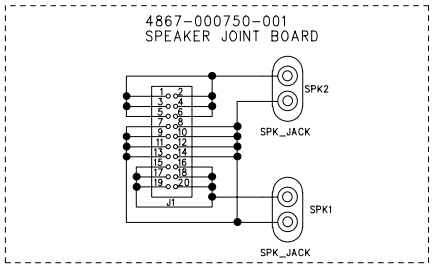
TONE CONTROL:
BASS:50Hz SINEWAVE FOR REFERENCE.
TREBLE:10KHz SINEWAVE FOR REFERENCE.

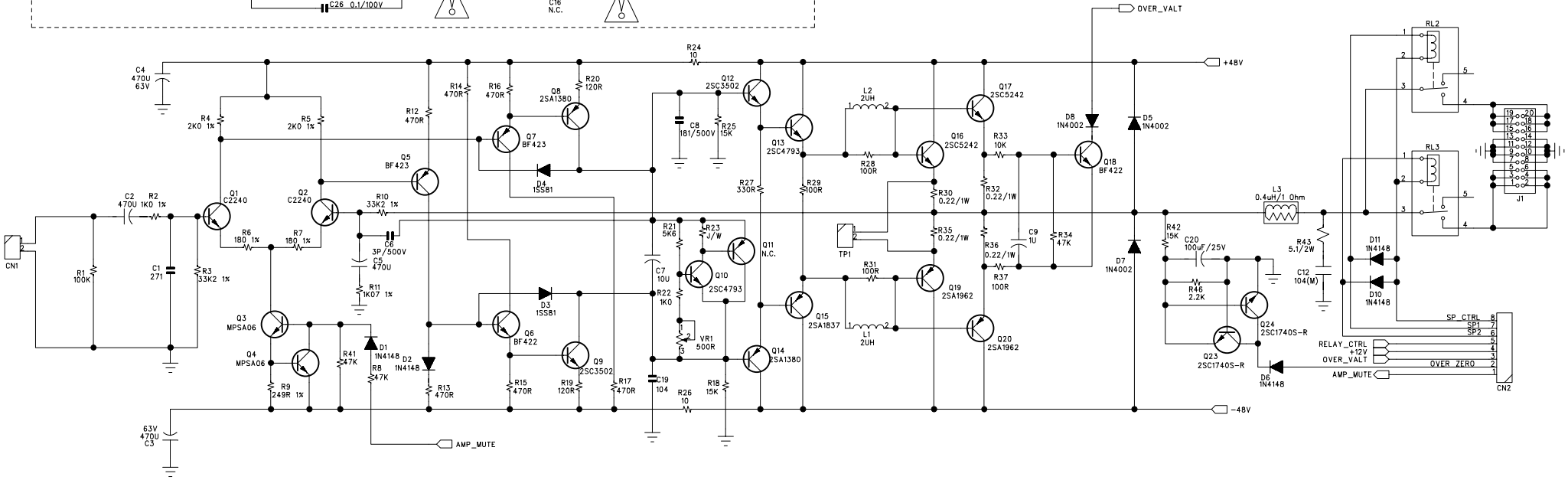
PURPOSE:SAMPLE MAKING	PRODUCTION	SHEET 1 OF 1	REV A
PREPARED BY:	CHECKED BY:	APPROVED BY:	


YN
SCHEMATIC DRAWING
HKENF 970004-00
FILE NAME: INOUT.SCH
DATE: 2001-07-15
MODEL NO: HK670
PART NO: 4867-000570-001
PART NAME: I/O BOARD
PHONO PRE. AMPLIFIER
FROM POWER BD.
+12V
-12V
+VCC4
-VCC4
PHONO
CD_IN
CDR_IN
CDR_OUT
AUX_IN
TV_IN
TUNER_IN
TAPE_IN
TAPE_OUT
STB
CLK
DATA
U1 NJU7313L
U2 NJU7311L
U5 NJU201A
U4-A NE5532
U4-B NE5532
U4-C NE5532
CN1 FROM TONE BD
CN4 TO DIGITAL CTR. BD.
CN5
1 CD_DIG_OUT
2 CDR_DIG_OUT
3 AUX_DIG_OUT
4 REM
5 +5V
6 DGND
PURPOSE: SAMPLE MAKING
PRODUCTION
SHEET 1 OF 1
REV A
PREPARED BY:
CHECKED BY:
APPROVED BY:

YN	SCHEMATIC DRAWING	FILE NAME: LEFTAMP.SCH
	HKENF 970004-00	DATE: 2001-07-14
MODEL NO: HK670	PART NO: 4867-000090-101 4867-000750-001	PART NAME: LEFT CHANNEL POWER AMPLIFIER SPEAKER JOINT BOARD

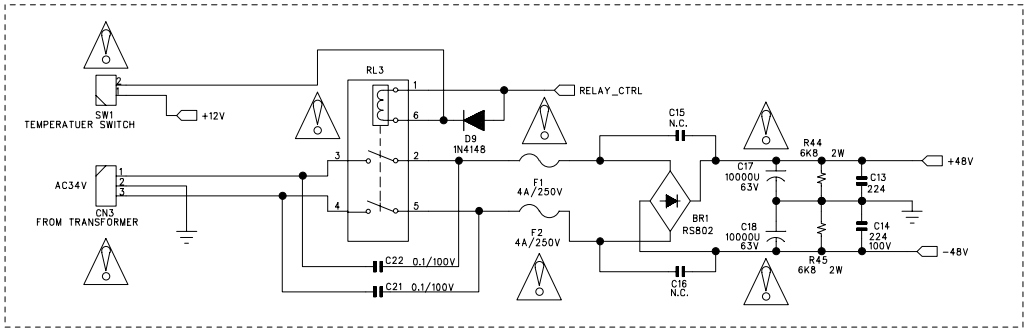


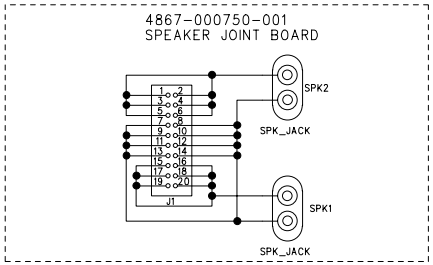


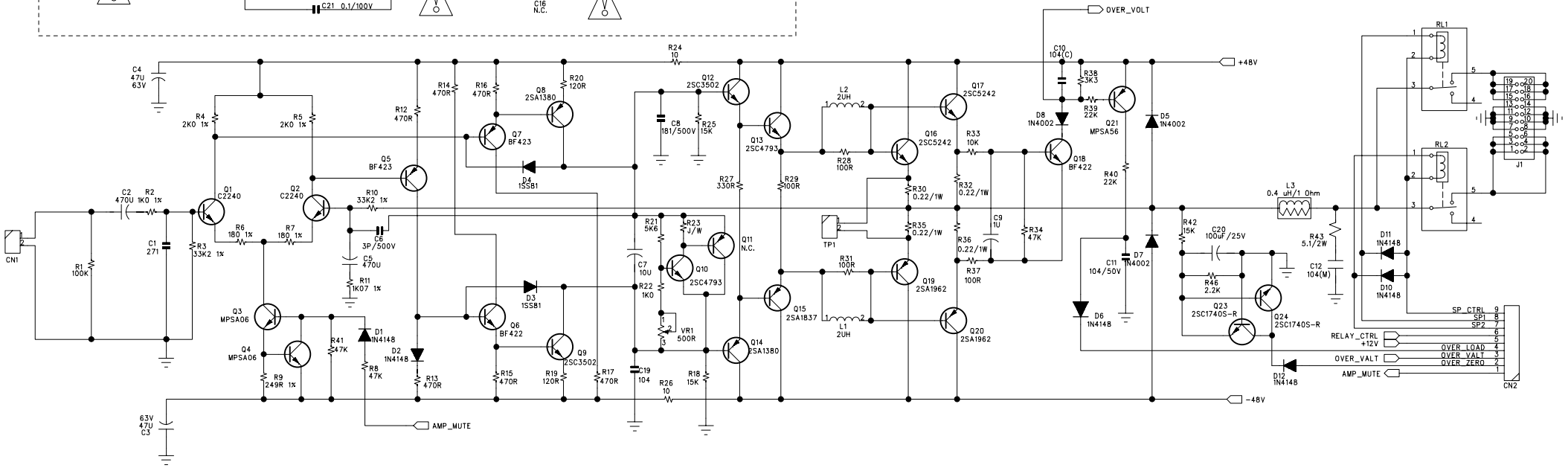


PURPOSE: SAMPLE MAKING	PRODUCTION	SHEET 1 OF 1	REV A
PREPARED BY:	CHECKED BY:	APPROVED BY:	

YN	SCHEMATIC DRAWING	FILE NAME: RIGHTAMP.SCH
	HKENF 970004-00	DATE: 2001-07-14
MODEL NO: HK670	PART NO: 4867-000090-001 4867-000750-001	PART NAME: RIGHT CHANNEL POWER AMPLIFIER SPEAKER JOINT BOARD



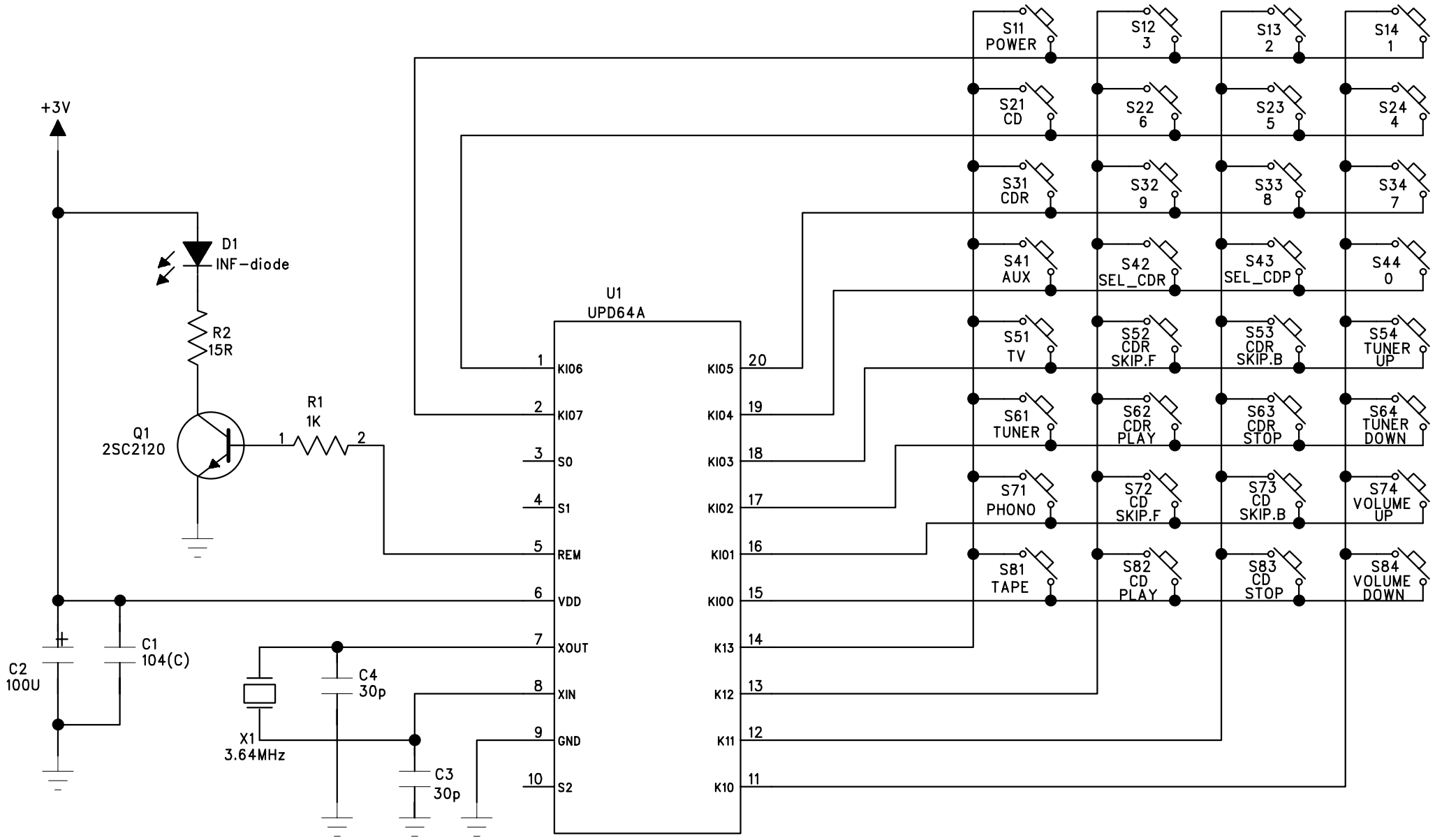




PURPOSE: SAMPLE MAKING	PRODUCTION	SHEET 1 OF 1	REV A
PREPARED BY:	CHECKED BY:	APPROVED BY:	

YN	SCHEMATIC DRAWING	FILE NAME: REMOTE.SCH
	HKENF 970004-00	DATE: 2001-07-15

MODEL NO: HK670	PART NO: 4867-150080-001	PART NAME: REMOTE BOARD



PURPOSE:SAMPLE MAKING		PRODUCTION	☒	SHEET 1 OF 1	REV A
PREPARED BY:		CHECKED BY:		APPROVED BY:	

HK670 ELECTRICAL PART LIST

POWER SUPPLY BOARD ASSEMBLY

Reference	Part Number	Description	Quality
	9467-015000-071	**HK670 POWER SUPPLY BOARD ASSY REV A**	
Resistor			
R604	1001-000320-000	CARBON FILM RESISTOR 10 OHM 2W +-5%	1
R1, R2	1011-001014-020	METAL FILM RESISTOR 100 OHM 1/4W +-1% AXIAL TAPE	2
R4, R12	1011-002018-020	METAL FILM RESISTOR 1K OHM 1/8W +-1% AXIAL TAPE	2
R601	1011-003016-020	METAL FILM RESISTOR 10K 1/6W +-1% AXIAL TAPE	1
R8, R10, R602, R603	1011-004018-020	METAL FILM RESISTOR 100K OHM 1/8W +-1% AXIAL TAPE	4
R9, R11	1012-203018-020	METAL FILM RESISTOR 22K OHM 1/8W +-1% AXIAL TAPE	2
R13	1014-701018-020	METAL FILM RESISTOR 470 OHM 1/8W +-1% AXIAL TAPE	1
R6, R7	1014-702018-020	METAL FILM RESISTOR 4.7K OHM 1/8W +-1% AXIAL TAPE	2
R3, R5	1016-800014-020	METAL FILM RESISTOR 68 OHM 1/4W +-1%AXIAL TAPE	2
Capacitor			
C607, C609, C618, C621	1100-104044-000	CERAMIC CAP. 0.1uF/50V +-20%	4
C3, C4, C5, C6	1102-101024-000	ELECT. CAP. 100UF/25V +-20%	4
C1, C2	1102-220024-000	ELECT. CAP. 22UF/25V +-20%	2
C614, C615, C619	1102-221024-000	ELECT. CAP. 220UF/25V +-20%	3
C606	1102-222024-001	ELECT. CAP. 2200 UF/25V +-20% NIPPON CHEMI-CON	1
C603	1102-470024-000	ELECT. CAP. 47UF/25V +-20%	1
C608	1102-471014-000	ELECT. CAP. 470uF/16V +-20% 8X12MM	1
C601	1102-471024-000	EL.CAP. 25V470UF CUT +-20%	1
C610, C611	1102-471024-002	ELECT. CAP. 470uF/25V +-20% 10x12.5mm	2
C612, C613, C616, C617	1117-104053-000	METALLIZED POLYE CAP. 0.1UF/63V +-10% BOX P=5MM	4
Transistor, Diode			
Q1, Q602, Q605, Q607, Q608, Q609	1300-100300-100	TRANSISTOR NPN KSR1003 (SAMSUNG)	6
Q606, Q610	1300-805000-100	TRANSISTOR NPN 8050D TO92 SAMSUNG	2
D605, D606	1401-101000-000	BRIDGE RECTIFIER DB101 50V 1A UL	2
D602, D603, D604	1401-141480-010	DIODE 1N4148 TAPE	3
Coil, Connector, Cable			
L601	1503-000000-100	BEAD COIL FB-35608 C.T.C.	1
CN4	2300-003000-001	STRAIGHT CONN WAFER 3PIN 2MMP JST	1
CN605	2300-005100-001	STRAIGHT CONN WAFER 5PINS 2.5MMP JST (JAPAN)	1
CN601	2300-006000-001	STRAIGHT CONN WAFER 6 PIN 2MMP JST	1
CN604	2301-012900-000	12PIN FILM TYPE CABLE STRAIGHT CONN	1
CN2	2301-013900-000	13PIN FILM TYPE CABLE STRAIGHT CONN	1
CN1	2301-016901-000	16PIN FILM TYPE CABLE STRAIGHT CONN	1
CN607	2501-037501-150	3PI 750MM 2CONN CABLE AWG#28 2MMP 1BOARD-IN(BLACK)	1
CN606	2501-070701-150	7PIN 70MM 2CONNCABLE AWG#28 2MMP1BOARD-IN(BLACK)	1
CN603	2501-082201-150	8PIN 220MM 2CONNCABLE AWG#28 2MMP1BOARD-IN(BLACK)	1
CN602	2501-092001-150	9PIN 200MM 2CONNCABLE AWG#28 2MMP1BOARD-IN(BLACK)	1
CN3	2511-031501-151	3P.150MM 2CONNSHIELD CABLEAWG#28 2MMP1BOARD-IN(B.	1
Fuse			
F602, F603	4030-100000-001	SLOW BLOW MICRO FUSE 1A	2
F601	4030-125000-002	FUSE 1A 250V GLASS TABE 5X20MM BSI	1
F601	4031-000003-002	FUSE HOLDER 5X20MM HF-003A MILKY (HOLLYLAND)	1
IC			
U1	4145-600001-600	I.C. NJM4560L 8PINS SIL (NJRC)	1
U601	4178-050334-700	I.C. L7805CV TO220 THOMSON	1
U603, U604	4178-120301-600	I.C. NJM7812FA	2
U602	4179-120301-600	I.C. NJM 7912FA	1
U2	4181-700010-000	I.C. LTV817B LITON	1
PCB, Screw, Heatsink			
	4867-000070-001	HK670 POWER SUPPLY BOARD REV A	1
U601/U604	6531-150222-000	REGULATOR HEATSINK PLATE	1
U602, U603	6542-110203-000	CD421 HEAT SINK	2
U601, U602, U603, U604	7003-006003-111	SCREW M3X6 B.T.B. B/H (BLACK)	1

PRE-AMP BOARD ASSEMBLY

Reference	Part Number	Description	Quality
	9467-015000-571	**HK670 I/O BOARD ASSY REV A**	
Resistor			
R831, R832	1011-001014-020	METAL FILM RESISTOR 100 OHM 1/4W +-1% AXIAL TAPE	2
R43, R44, R50, R55	1011-001018-020	METAL FILM RESISTOR 100 OHM 1/8W +-1% AXIAL TAPE	4

R3, R4, R5, R6, R9, R10, R11, R12, R13, R14, R17, R18, R19, R20, R23, R24, R25, R26, R29, R30, R31, R32, R35, R36, R37, R38, R39, R40, R41, R42, R48, R49, R56, R57, R802, R817	1011-002018-020	METAL FILM RESISTOR 1K OHM 1/8W +-1% AXIAL TAPE	36
R47, R51, R815, R830	1011-004018-020	METAL FILM RESISTOR 100K OHM 1/8W +-1% AXIAL TAPE	4
R809, R823	1012-702918-020	METAL FILM RESISTOR 2.7K OHM 1/8W +-0.5% TAPE	2
R807, R821	1012-704918-020	METAL FILM RESISTOR 270K OHM 1/8W +-0.5% TAPE	2
R59, R76, R77	1013-300018-020	METAL FILM RESISTOR 33 OHM 1/8W +-1% AXIAL TAPE	3
R813, R829	1013-301016-020	METAL FILM RESISTOR 330 OHM 1/6W +-1% AXIAL TAPE	2
R814, R828	1013-302016-020	METAL FILM RESISTOR 3.3K OHM 1/6W +-1% AXIAL TAPE	2
R806, R810, R820, R824	1013-304918-020	METAL FILM RESISTOR 330K OHM 1/8W +-0.5% TAPE	4
R808, R822	1013-903918-020	METAL FILM RESISTOR 39K OHM 1/8W +-0.5% AXIAL TAPE	2
R804, R826	1014-701018-020	METAL FILM RESISTOR 470 OHM 1/8W +-1% AXIAL TAPE	2
R1, R2, R7, R8, R15, R16, R21, R22, R27, R28, R33, R34, R801, R816	1014-703018-020	METAL FILM RESISTOR 47K 1/8W +-1% AXIAL TAPE	14
R811, R812, R825, R827	1016-800016-020	METAL FILM RESISTOR 68 OHM 1/6W +-1% AXIAL TAPE	4
R803, R818	1016-802018-020	METAL FILM RESISTOR 6.8K 1/8W +-1% AXIAL TAPE	2
R805, R819	1018-201918-020	METAL FILM RESISTOR 820 OHM 1/8W +-0.5% TAPE	2
Capacitor			
C17, C18, C25, C26, C47	1100-101042-000	CERAMIC CAP. 100PF/50V +-5%	5
R802-G, R817-G	1100-104044-000	CERAMIC CAP. 0.1uF/50V +-20%	2
C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C16, C16	1100-221043-000	CERAMIC CAP. 220pF/50V +- 10%	12
C807, C809, C812, C814	1101-202062-000	POLYESTER/MYLAR CAP. 0.002UF/100V +-5%	4
C806, C811	1101-562062-000	POLYESTER/MYLAR CAP. 5600PF/100V +-5%	2
C19, C21, C28, C29, C36, C38, C815, C816	1102-100024-000	ELECT. CAP. 10UF/25V +-20%	8
C23, C24	1102-471024-002	ELECT. CAP. 470uF/25V +-20% 10x12.5mm	1
C27, C30, C31, C33, C808, C813	1102-477044-000	ELECT. CAP. 4.7uF/50V +-20%	6
C801, C803	1105-220044-000	NON-POLARIZED CAP. 22UF/50V +-20%	2
C805, C810	1105-471014-000	NON-POLARIZED CAP. 470UF/16V +-20%	2
C1, C2, C3, C4	1114-201042-001	POLYPROPY LENE CAP. 200P/50V +-5% (RODAN)	4
C20, C22, C32, C34, C43, C44	1117-104053-000	METALLIZED POLYE CAP. 0.1UF/63V +-10% BOX P=5MM	6
C802, C804	1181-151042-000	CERAMIC CAP. 150PF/50V +-5% NPO+- 60PPM	2
Transistor			
Q801, Q802, Q803, Q805, Q806, Q807, Q808, Q810	1300-945000-100	TRANSISTOR NPN KSC945-Y (SAMSUNG)	8
Q804, Q809	1301-273300-101	TRANSISTOR PNP 2SA733Y	2
Connector, Jack			
CM1	2300-003000-001	STRAIGHT CONN WAFER 3PIN 2MMP JST	1
CN5	2300-004000-002	STRAIGHT CONN WAFER 4PINS 2MMP JST	1
CN4	2300-006000-001	STRAIGHT CONN WAFER 6 PIN 2MMP JST	1
CN1	2301-016901-000	16PIN FILM TYPE CABLE STRAIGHT CONN	1
RCA1	2330-003990-001	RCA JACK 2P 202 R/W (GOLD)	1
RCA3	2330-006990-001	RCA JACK 4P 402 R/R/W/W WITH SHIELD PLATE (GOLD)	1
RCA2, RCA4	2330-009990-001	RCA JACK 6P 602 R/R/R/W/W/W WITH SHIELD PLATE GOLD	2
IC			
U5	4120-100101-600	I.C. NJU201A 28PINS SOP (JRC)	1
U4	4155-320052-900	I.C.5532P DIP (TI)	1
U2	4173-110051-600	IC NJU7311L 28P DIP JRC	1
U1	4173-130051-600	IC NJU7313L 28P DIP JRC	1
PCB			
	4867-000570-001	HK670 I/O BOARD REV A	1

LEFT AMPLIFIER BOARD ASSEMBLY

Reference	Part Number	Description	Quality
	9467-015001-091	**HK670 LEFT CHANNEL POWER AMPLIFIER ASSY REV A**	
Resistor			
R24, R26	1011-000016-020	METAL FILM RESISTOR 10 OHM 1/6W +-1% AXIAL TAPE	2
R28, R29, R31, R37	1011-001018-020	METAL FILM RESISTOR 100 OHM 1/8W +-1% AXIAL TAPE	4
R2, R22	1011-002018-020	METAL FILM RESISTOR 1K OHM 1/8W +-1% AXIAL TAPE	2
R33	1011-003016-020	METAL FILM RESISTOR 10K 1/6W +-1% AXIAL TAPE	1
R1	1011-004018-020	METAL FILM RESISTOR 100K OHM 1/8W +-1% AXIAL TAPE	1
R11	1011-072016-020	METAL FILM RESISTOR 1.07K OHM 1/6W +-1% AXIAL TAPE	1
R19, R20	1011-201016-020	METAL FILM RESISTOR 120 OHM 1/6W +-1% AXIAL TAPE	2
R18, R25, R34, R42	1011-503016-020	METAL FILM RESISTOR 15K OHM 1/6W +-1% AXIAL TAPE	4
R6, R7	1011-801016-020	METAL FILM RESISTOR 180 OHM 1/6W +-1% AXIAL TAPE	2

R4, R5, R46	1012-002016-020	METAL FILM RESISTOR 2K OHM 1/6W +-1% TAPE	3
R9	1012-491016-020	METAL FILM RESISTOR 249 OHM 1/6W +-1% TAPE	1
R27	1013-301016-020	METAL FILM RESISTOR 330 OHM 1/6W +-1% AXIAL TAPE	1
R3, R10	1013-323016-020	METAL FILM RESISTOR 33.2K OHM 1/6W +-1% TAPE	2
R12, R13, R14, R15, R16, R17	1014-701018-020	METAL FILM RESISTOR 470 OHM 1/8W +-1% AXIAL TAPE	6
R8, R41	1014-703018-020	METAL FILM RESISTOR 47K 1/8W +-1% AXIAL TAPE	2
R21	1015-602016-020	METAL FILM RESISTOR 5.6K OHM 1/6W +-1% AXIAL TAPE	1
VR1	1065-001600-171	SEMI-FIXED RESISTOR 500 OHM +-30% PA0630-VA1-B501	1
R30, R32, R35, R36	1092-208310-020	METAL OXIDE RESISTOR 0.22 OHM 1W +-5% AXIAL TAPE	4
R43	1095-107310-020	METAL OXIDE RESISTOR 5.1 OHM 1W +-5% AXIAL TAPE	1
R44, R45	1096-802320-020	METAL OXIDE RESISTOR 6.8K OHM 2W +-5% AXIAL TAPE	2
Capacitor			
C26, C27	1100-104064-000	CERAMIC CAP. 0.1UF/100V +/-20%	2
C12	1101-104063-000	POLYESTER/MYLAR CAP. 0.1UF/100V +-10%	1
C7	1102-100024-000	ELECT. CAP. 10UF/25V +-20%	1
C20	1102-101024-000	ELECT. CAP. 100UF/25V +-20%	1
C17, C18	1102-123054-001	ELECT. CAP. 12000uF/63V +-20% (NICHICON)	2
C9	1102-337044-000	ELECT. CAP. 3.3uF/50V +-20%	1
C3, C4	1102-470054-000	ELECT CAP. 47UF/63V +-20%	2
C2, C5	1102-471024-002	ELECT. CAP. 470uF/25V +-20% 10x12.5mm	2
C8	1114-181062-000	POLYPROPYLENE CAP. 180P/100V +-5%	1
C13, C14	1114-224093-000	METALLIZED POLYPROPYLENE CAP. 0.22UF/250V +-10%	2
C1	1114-271062-000	POLYPROPYLENE CAP. 270PF 100V +-5%	1
C6	1181-307042-000	CERAMIC CAP. 3PF/50V +-5% NPO	1
Transistor, Diode			
Q3, Q4	1300-060000-100	TRANSISTOR NPN MPSA06 TO92	2
Q23, Q24	1300-174000-100	TRANSISTOR NPN 2SC1740 TO-92	2
Q1, Q2	1300-224000-100	TRANSISTOR NPN 2SC2240-GR TO-92 (TOSHIBA)	2
Q9, Q12	1300-350200-800	TRANSIISTOR NPN 2SC3502 TO126 (SANYO)	2
Q6, Q18	1300-422000-100	TRANSISTOR NPN BF422 (PHILIPS)	2
Q10, Q13	1300-479300-200	TRANSISTOR NPN 2SC4793 (TOSHIBA)	2
Q16, Q17	1300-524209-900	TRANSISTOR NPN 2SC5242-O (TOSHIBA)	2
Q8, Q14	1301-138000-800	TRANSIISTOR PNP 2SA1380 TO126 (SANYO)	2
Q15	1301-183700-200	TRANSISTOR PNP 2CA1837 (TOSHIBA)	1
Q19, Q20	1301-196209-900	TRANSISTOR PNP 2SA1962-O (TOSHIBA)	2
Q5, Q7	1301-423000-100	TRANSISTOR PNP BF423 (PHILIPS)	2
D5, D7, D8	1401-140010-000	DIODE 1N4001	3
D1, D2, D6, D9, D10, D11	1401-141480-010	DIODE 1N4148 TAPE	6
BR1	1401-802000-000	DIODE BRIDGE RS802	1
D3, D4	1404-181001-200	HIGH VOLTAGE SWITCHING DIODE 1SS81(HITACH) TAPE	2
Coil, Inductor			
L3	1502-047400-900	AUDIO FILTTER L=4UH R=1 +-20% LR0515-R40M	1
L1, L2	1503-000000-100	BEAD COIL FB-35608 C.T.C.	2
Connector			
CN1	2300-002000-001	STRAIGHT CONN WAFER 2PIN 2MMP JST	1
TP1	2300-002100-000	STRAIGHT CONN. WAFER 2 PINS 2.5mmP	1
CN3	2300-003400-001	STRAIGHT CONN WAFER 3PIN 3.96MMP JST	1
CN2	2300-008000-002	STRAIGHT CONN WAFER 8PINS 2MMP JST	1
J1	2333-004919-001	SPEAKER JACK PSZ-405 4PIN RED/BLK (GOLD)	1
J1	2370-020110-000	RIGHT ANGLE HEADER 20PIN 2.5MMP	1
Thermal Switch, Fuse, Relay			
SW1	4014-170275-000	THERMAL PROTECT SWITCH 17AM027A5-32 (TI)	1
F1, F2	4030-618004-001	FUSE T-4A/250V 618004 5X20MM	2
F1, F2	4031-050100-001	FUSE HOLDER 5X20MM PCB MOUNT WITH PLASTIC BASE	2
RL1	4050-110122-000	RELAY 8A/250VAC 2POLE ME-11-012-2H4 COIL:12VDC	1
RL2, RL3	4050-210000-000	RELAY G2R-1A-E-S DC12V 16A (OMRON)	2
PCB, Screw, Heatsink, Misc			
Q16, Q17, Q19, Q20	4080-000006-001	MICA TRANS. WASHER 25X29X0.15(MM) (AP10692/2)	4
	4080-058016-000	MICA WASHER 58X16X0.15t	1
	4867-000090-102	LEFT CHANNEL AMPLIFIER BOARD REV B	1
	4867-000750-001	HK670 SPEAKER JOINT BOARD REV A	1
	6567-150008-000	HK670 HEAT SINK	1
	7002-010010-111	SCREW M2X10 M/C TYPE B/H BLACK	5
	7003-008002-111	SCREW M3X8 P.T.P. B/H (BLACK)	2
	7003-014010-111	SCREW M3X14 M/C TYPE B/H BLK	4
	7102-304636-040	NYLON WASHER 2.3X4.6X3.6	5
Q16, Q17, Q19, Q20	7103-206504-081	EX-TOOTHED LOCK WASHER M3 (BLK)	4

RIGHT AMPLIFIER BOARD ASSEMBLY

Reference	Part Number	Description	Quality
	9467-015000-091	**HK670 RIGHT CHANNEL POWER AMPLIFIER ASSY REV A**	
Resistor			
R24, R26	1011-000016-020	METAL FILM RESISTOR 10 OHM 1/6W +-1% AXIAL TAPE	2
R28, R29, R31, R37	1011-001018-020	METAL FILM RESISTOR 100 OHM 1/8W +-1% AXIAL TAPE	4
R2, R22	1011-002018-020	METAL FILM RESISTOR 1K OHM 1/8W +-1% AXIAL TAPE	2
R33	1011-003016-020	METAL FILM RESISTOR 10K 1/6W +-1% AXIAL TAPE	1
R1	1011-004018-020	METAL FILM RESISTOR 100K OHM 1/8W +-1% AXIAL TAPE	1
R11	1011-072016-020	METAL FILM RESISTOR 1.07K OHM 1/6W +-1% AXIAL TAPE	1
R19, R20	1011-201016-020	METAL FILM RESISTOR 120 OHM 1/6W +-1% AXIAL TAPE	2
R18, R25, R34, R42	1011-503016-020	METAL FILM RESISTOR 15K OHM 1/6W +-1% AXIAL TAPE	4
R6, R7	1011-801016-020	METAL FILM RESISTOR 180 OHM 1/6W +-1% AXIAL TAPE	2
R4, R5	1012-002016-020	METAL FILM RESISTOR 2K OHM 1/6W +-1% TAPE	2
R46	1012-202018-020	METAL FILM RESISTOR 2.2K OHM 1/8W +-1% AXIAL TAPE	1
R39, R40	1012-203018-020	METAL FILM RESISTOR 22K OHM 1/8W +-1% AXIAL TAPE	2
R9	1012-491016-020	METAL FILM RESISTOR 249 OHM 1/6W +-1% TAPE	1
R27	1013-301016-020	METAL FILM RESISTOR 330 OHM 1/6W +-1% AXIAL TAPE	1
R38	1013-302016-020	METAL FILM RESISTOR 3.3K OHM 1/6W +-1% AXIAL TAPE	1
R3, R10	1013-323016-020	METAL FILM RESISTOR 33.2K OHM 1/6W +-1% TAPE	2
R12, R13, R14, R15, R16, R17	1014-701018-020	METAL FILM RESISTOR 470 OHM 1/8W +-1% AXIAL TAPE	6
R8, R41	1014-703018-020	METAL FILM RESISTOR 47K 1/8W +-1% AXIAL TAPE	2
R21	1015-602016-020	METAL FILM RESISTOR 5.6K OHM 1/6W +-1% AXIAL TAPE	1
VR1	1065-001600-171	SEMI-FIXED RESISTOR 500 OHM +-30% PA0630-VA1-B501	1
R30, R32, R35, R36	1092-208310-020	METAL OXIDE RESISTOR 0.22 OHM 1W +-5% AXIAL TAPE	4
R43	1095-107310-020	METAL OXIDE RESISTOR 5.1 OHM 1W +-5% AXIAL TAPE	1
R44, R45	1096-802320-020	METAL OXIDE RESISTOR 6.8K OHM 2W +-5% AXIAL TAPE	2
Capacitor			
C10	1100-104044-000	CERAMIC CAP. 0.1uF/50V +-20%	1
C21, C22	1100-104064-000	CERAMIC CAP. 0.1UF/100V +/-20%	2
C12	1101-104063-000	POLYESTER/MYLAR CAP. 0.1UF/100V +-10%	1
C7	1102-100024-000	ELECT. CAP. 10UF/25V +-20%	1
C20	1102-101024-000	ELECT. CAP. 100UF/25V +-20%	1
C17, C18	1102-123054-001	ELECT. CAP. 12000uF/63V +-20% (NICHICON)	2
C9	1102-337044-000	ELECT. CAP. 3.3uF/50V +-20%	1
C3, C4	1102-470054-000	ELECT CAP. 47UF/63V +-20%	2
C2, C5	1102-471024-002	ELECT. CAP. 470uF/25V +-20% 10x12.5mm	2
C8	1114-181062-000	POLYPROPYLENE CAP. 180P/100V +-5%	1
C13, C14	1114-224093-000	METALLIZED POLYPROPYLENE CAP. 0.22UF/250V +-10%	2
C1	1114-271062-000	POLYPROPYLENE CAP. 270PF 100V +-5%	1
C6	1181-307042-000	CERAMIC CAP. 3PF/50V +-5% NPO	1
Transistor, Diode			
Q3, Q4	1300-060000-100	TRANSISTOR NPN MPSA06 TO92	2
Q23, Q24	1300-174000-100	TRANSISTOR NPN 2SC1740 TO-92	2
Q1, Q2	1300-224000-100	TRANSISTOR NPN 2SC2240-GR TO-92 (TOSHIBA)	2
Q9, Q12	1300-350200-800	TRANSIISTOR NPN 2SC3502 TO126 (SANYO)	2
Q6, Q18	1300-422000-100	TRANSISTOR NPN BF422 (PHILIPS)	2
Q10, Q13	1300-479300-200	TRANSISTOR NPN 2SC4793 (TOSHIBA)	2
Q16, Q17	1300-524209-900	TRANSISTOR NPN 2SC5242-O (TOSHIBA)	2
Q8, Q14	1301-138000-800	TRANSIISTOR PNP 2SA1380 TO126 (SANYO)	2
Q15	1301-183700-200	TRANSISTOR PNP 2CA1837 (TOSHIBA)	1
Q19, Q20	1301-196209-900	TRANSISTOR PNP 2SA1962-O (TOSHIBA)	2
Q5, Q7	1301-423000-100	TRANSISTOR PNP BF423 (PHILIPS)	2
Q21	1301-560000-100	TRANSISTOR PNP MPSA56 TO92	1
D5, D7, D8	1401-140010-000	DIODE 1N4001	3
D1, D2, D6, D9, D10, D11, D12	1401-141480-010	DIODE 1N4148 TAPE	7
BR1	1401-802000-000	DIODE BRIDGE RS802	1
D3, D4	1404-181001-200	HIGH VOLTAGE SWITCHING DIODE 1SS81(HITACH) TAPE	2
Coil, Inductor			
L3	1502-047400-900	AUDIO FILTTER L=4UH R=1 +-20% LR0515-R40M	1
L1, L2	1503-000000-100	BEAD COIL FB-35608 C.T.C.	2
Connector			
CN1	2300-002000-001	STRAIGHT CONN WAFER 2PIN 2MMP JST	1
TP1	2300-002100-000	STRAIGHT CONN. WAFER 2 PINS 2.5mmP	1
CN3	2300-003400-001	STRAIGHT CONN WAFER 3PIN 3.96MMP JST	1
CN2	2300-009000-001	STRAIGHT CONN WAFER 9PINS 2MMP JST	1
J1	2333-004919-001	SPEAKER JACK PSZ-405 4PIN RED/BLK (GOLD)	1
J1	2370-020110-000	RIGHT ANGLE HEADER 20PIN 2.5MMP	1

Thermal Switch, Fuse, Relay			
SW1	4014-170275-000	THERMAL PROTECT SWITCH 17AM027A5-32 (TI)	1
F1, F2	4030-618004-001	FUSE T-4A/250V 618004 5X20MM	2
F1, F2	4031-050100-001	FUSE HOLDER 5X20MM PCB MOUNT WITH PLASTIC BASE	2
RL1	4050-110122-000	RELAY 8A/250VAC 2POLE ME-11-012-2H4 COIL:12VDC	1
RL2, RL3	4050-210000-000	RELAY G2R-1A-E-S DC12V 16A (OMRON)	2
PCB, Screw, Heatsink, Misc			
Q16, Q17, Q19, Q20	4080-000006-001	MICA TRANS. WASHER 25X29X0.15(MM) (AP10692/2)	4
	4080-058016-000	MICA WASHER 58X16X0.15t	1
	4867-000090-002	RIGHT CHANNEL AMPLIFIER BOARD REV B	1
	4867-000750-001	HK670 SPEAKER JOINT BOARD REV A	1
	6567-150008-000	HK670 HEAT SINK	1
	7002-010010-111	SCREW M2X10 M/C TYPE B/H BLACK	5
	7003-008002-111	SCREW M3X8 P.T.P. B/H (BLACK)	2
	7003-014010-111	SCREW M3X14 M/C TYPE B/H BLK	4
	7102-304636-040	NYLON WASHER 2.3X4.6X3.6	5
Q16, Q17, Q19, Q20	7103-206504-081	EX-TOOTHED LOCK WASHER M3 (BLK)	4

TONE CONTROL BOARD ASSEMBLY

Reference	**Part Number**	**Description**	**Quality**
	9467-015000-561	**HK670 TONE CONTROL BOARD ASSY REV A**	
Resistor			
R37, R46	1001-002313-521	THICK FILM RESISTOR 1K OHM +-5% 1/16W SMD 0603	2
R48	1001-004313-521	THICK FILM RESISTOR 100K OHM +-5% 1/16W SMD 0603	1
R47	1001-005313-521	THICK FILM RESISTOR 1M OHM +-5% 1/16W SMD 0603	1
R44, R45	1002-702313-521	THICK FILM RESISTOR 2.7K OHM +-5% 1/16W SMD 0603	2
R42, R43	1011-001013-520	THICK FILM RESISTOR 100 OHM 1/16W +-1% SMD0603	2
R40, R41	1011-001018-020	METAL FILM RESISTOR 100 OHM 1/8W +-1% AXIAL TAPE	2
R10, R11, R12, R14, R15, R16	1011-003013-520	THICK FILM RESISTOR 10K OHM 1/16W +-1% SMD0603	6
R4, R8, R38, R39, R49, R50	1011-004013-520	THICK FILM RESISTOR 100K OHM 1/16W +-1% SMD0603	6
R17, R20	1011-005013-520	THICK FILM RESISTOR 1M OHM 1/16W +-1% SMD0603	2
R2, R7	1012-402013-520	THICK FILM RESISTOR 2.4K OHM 1/16W +-1% SMD0603	2
R1, R5	1013-304013-520	THICK FILM RESISTOR 330K OHM 1/16W +-1% SMD0603	2
R31, R32, R35, R36	1014-702013-520	THICK FILM RESISTOR 4.7K OHM 1/16W +-1% SMD0603	4
R3, R6	1015-602013-520	THICK FILM RESISTOR 5.6K OHM 1/16W +-1% SMD0603	2
R9, R13, R18, R19	1016-802013-520	THICK FILM RESISTOR 6.8K OHM 1/16W +-1% SMD0603	4
VR2, VR3	1061-004411-130	VAR RESISTOR 100K+-10%0.1w(ROTARY DUAL B-TYPE)	2
VR1	1062-504511-160	VAR.RESISTOR 250K +-20% 0.1W (ROTARY DUAL MN-TYPE)	1
Capacitor			
C28, C30, C31, C32, C39, C40, C41, C42	1100-104025-400	CERAMIC CAP 0.1uF/25V +80%-20% SMD0603	8
C11, C12, C15, C16	1101-104062-000	POLYESTER/MYLAR CAP. 0.1UF/100V +-5%	4
C9, C10, C13, C14	1101-222062-000	POLYESTER/MYLAR CAP. 2200PF/100V +-5%	4
C19, C23	1101-472062-000	POLYESTER/MYLAR CAP. 4700PF/100V +-5%	2
C17, C18, C24, C35, C38	1102-100024-000	ELECT. CAP. 10UF/25V +-20%	5
C21, C22	1102-101024-000	ELECT. CAP. 100UF/25V +-20%	2
C33, C34, C36, C37	1102-220024-000	ELECT. CAP. 22UF/25V +-20%	4
C1, C5, C25, C29	1105-100024-000	NON-POLARIZED CAP. 10UF/25V +-20%	4
C3, C7	1105-101024-000	NON-POLARIZED CAP 100UF/25V +-20% 5MMP	2
C45, C46	1117-104053-000	METALLIZED POLYE CAP. 0.1UF/63V +-10% BOX P=5MM	2
C4, C8, C20, C26	1181-100042-400	CERAMIC CAP. 10PF/50V +-5% NPO SMD 0603	4
C2, C6	1181-101042-400	CERAMIC CAP. 100PF/50V +-5% NPO SMD 0603	2
Transistor, Diode			
Q5	1300-100300-100	TRANSISTOR NPN KSR1003 (SAMSUNG)	1
Q3, Q4	1300-174000-100	TRANSISTOR NPN 2SC1740 TO-92	2
Q1	1300-805000-100	TRANSISTOR NPN 8050D TO92 SAMSUNG	1
Q2	1301-273300-101	TRANSISTOR PNP 2SA733Y	1
D1, D2	1401-141480-010	DIODE 1N4148 TAPE	2
Connector, Relay			
CN7, CN8	2300-002000-001	STRAIGHT CONN WAFER 2PIN 2MMP JST	2
CN3	2300-003000-001	STRAIGHT CONN WAFER 3PIN 2MMP JST	1
CN6	2300-004000-002	STRAIGHT CONN WAFER 4PINS 2MMP JST	1
CN1	2300-006000-001	STRAIGHT CONN WAFER 6 PIN 2MMP JST	1
CN4	2300-007000-001	STRAIGHT CONN WAFER 7 PINS 2MMP JST	1
RL1	4050-000005-002	RELAY ME-2-5 DC 5V GS-SH-205T 120£	1
IC			
U1, U3, U4, U5	4155-320101-600	I.C.NJM5532M SOP8 (JRC)	4
PCB			
	4867-000560-001	HK670 TONE CONTROL BOARD REV A	1

FRONT PANEL BOARD ASSEMBLY

Reference	Part Number	Description	Quality
	9467-015000-041	**HK670 KEY CONTROL BOARD ASSY REV A**	
Resistor			
R336	1001-000316-020	CARBON FILM RESISTOR 10 OHM 1/6W +-5% AXIAL TAPE	1
R1, R312, R313, R338, R339, R341, R351, R355	1001-001316-020	CARBON FILM RESISTOR 100 OHM 1/6W +-5% AXIAL TAPE	8
R3, R302, R303, R310, R311, R315, R318, R319, R322, R324, R344	1001-002316-000	CARBON FILM RESISTOR 1K OHM 1/6 W +-5%	11
R4, R8, R316	1001-003316-020	CARBON FILM RESISTOR 10K OHM 1/6W +-5% TP52	3
R6, R317	1001-004316-020	CARBON FILM RESISTOR 100K OHM 1/6W +-5% TP52	2
R327	1001-201316-000	CARBON FILM RESISTOR 120 OHM 1/6 W +-5%	1
R343, R345, R346, R347, R349, R352, R353, R354	1001-501316-000	CARBON FILM RESISTOR 150 OHM 1/6 W +-5%	8
R9	1002-202316-000	CARBON FILM RESISTOR 2.2K OHM 1/6 W +-5%	1
R5	1002-203316-000	CARBON FILM RESISTOR 22K OHM 1/6 W +-5%	1
R326	1003-001316-000	CARBON FILM RESISTOR 300 OHM 1/6W +-5%	1
R348	1003-301316-000	CARBON FILM RESISTOR 330 OHM 1/6W +-5%	1
R2	1004-702316-000	CARBON FILM RESISTOR 4.7K OHM 1/6 W +-5%	1
R301	1007-501316-000	CARBON FILM RESISTOR 750 OHM 1/6W +-5%	1
R314	1008-202316-000	CARBON FILM RESISTOR 8.2K OHM 1/6 W +-5%	1
R335	1009-101316-000	CARBON FILM RESISTOR 910 OHM 1/6W	1
RN601	1044-702318-401	RESISTOR NETWORK 4K7X6 1/8W TYPE A 7PIN	1
RN602, RN603	1044-702318-402	RESISTOR NETWORK 4K7X8 1/8W TYPE A 9PIN	2
Capacitor			
C2, C3, C309	1100-103043-000	CERAMIC CAP. 0.01uF/50V +-10%	3
C4, C305, C308	1100-104044-000	CERAMIC CAP. 0.1uF/50V +-20%	3
C302, C307	1102-100024-000	ELECT. CAP. 10UF/25V +-20%	2
C301, C306, C340	1102-101024-000	ELECT. CAP. 100UF/25V +-20%	3
C303, C304	1181-390042-000	CERAMIC CAP. 39PF/50V +-5% NPO	2
Transistor, Diode			
Q2	1300-100300-100	TRANSISTOR NPN KSR1003 (SAMSUNG)	1
Q1, Q305, Q306, Q307	1300-332700-400	TRANSISTOR 2SC3327-A.B	4
Q302	1300-945000-100	TRANSISTOR NPN KSC945-Y (SAMSUNG)	1
Q303, Q308	1301-200300-100	TRANSISTOR PNP KSR2003 (SAMSUNG)	2
Q301	1301-273300-101	TRANSISTOR PNP 2SA733Y	1
D1, D2, D4, D5, D6, D7	1401-141480-000	DIODE 1N4148	6
Z1	1402-430001-200	ZENER DIODE 4V3 1/2W	1
Z301	1402-471201-200	ZENER DIODE 4.7V 1/2W	1
Coil			
L301, L302, L303	1503-000000-100	BEAD COIL FB-35608 C.T.C.	3
Reasonator			
X301	1602-400002-000	REASONATOR 4MHZ	1
Connector, Cable, Switch			
CN1	2300-002010-001	RIGHT ANGLE CONN WAFER 2PIN 2MMP JST	1
CN303	2300-005010-002	RIGHT ANGLE CONN WAFER 5PIN 2MMP JST	1
CN302	2300-012911-000	12PIN FLAT FLEXIBLE CABLE CONNECTOR 1MMP RT	1
CN301	2300-013911-000	13PIN FLAT FLEXIBLE CABLE CONNECTOR 1MMP RT	1
SW301, SW302, SW303, SW304, SW305	2400-020200-000	TACT SW 2P2T KPT-1105A (5MM)	5
CN304	2501-040601-150	4PIN 60MM 2CONN CABLE AWG#28 2MMP IBOARD-IN(BLACK)	1
CN301	2503-121009-090	12PIN 100MM FLAT FLEXIBLE CABLE 1MMP	1
CN302	2503-131009-090	13PIN 100MM FLAT FLEXIBLE CABLE 1MMP	1
IR Sensor, LED			
U304	3001-860500-000	INFRAED SENSOR IRM8605S	1
D301, D302, D303, D304, D305, D306, D307, D308, D309, D310, D311, D312, D313, D314, D315, D316, D317, D319, D320, D321, D322, D323, D324, D326, D327, D328, D330, D331, D333, D334, D335, D336, D337, D338, D340, D341, D342, D346, D347, D348, D349, D350, D352, D353	3100-000330-003	LED 3MM GREEN (LITON BIN3 RINK:PG)	44
IC			
U303	4116-410002-500	I.C. LB1641 SIL (SANYO)	1
U302	4140-510050-700	I.C. CD4051 8 CHANNEL ANALOG MUX/DEMUX	1
U301	4178-510013-200	I.C. W78E51 WINBOND 40DIP	1

PCB, Misc

	4867-000040-003	HK670 KEY CONTROL BOARD REV C	1
	6067-150010-000	LED BRACKET (LONG)	2
	6067-150011-000	LED BRACKET (SHORT)	1
	6600-210035-000	PADCOCK 10X10X7MM	1

HEADPHONE BOARD ASSEMBLY

Reference	Part Number	Description	Quality
	9467-015000-021	**HK670 HEADPHONE JACK BOARD ASSY REV A**	
Capacitor			
C1, C2	1100-103043-000	CERAMIC CAP. 0.01uF/50V +-10%	2
C3, C4	1102-471014-000	ELECT. CAP. 470uF/16V +-20% 8X12MM	2
Connector, Jack			
J1	2320-009911-003	6.4MM HEADPHONE JACK (JY-6303-02-030)GOLD PLATED	1
CN1	2501-032501-150	3PIN 250MM 2CON CABLEAWG#28 2MMP IBOARD-IN(BLACK)	1
PCB			
	4867-000020-001	HK670 HEADPHONE JACK BOARD REV A	1

STANDBY SWITCH BOARD ASSEMBLY

Reference	Part Number	Description	Quality
	9467-015000-111	**HK670 POWER CONTROL BOARD ASSY REV A**	
Resistor			
R1, R2	1004-701316-000	CARBON FILM RESISTOR 470 OHM 1/6 W +-5%	2
Switch, Connector			
SW841	2400-020200-000	TACT SW 2P2T KPT-1105A (5MM)	1
CN841	2501-050601-150	5PIN 60MM 2CONN CABLE AWG#28 2MMP IBOARD-IN(BLACK)	1
LED			
D841	3100-204000-001	LED 5MM BI- COLOR A/G #BL-BAG204	1
D1, D2	3100-420410-001	LED RED COLOR ROUND HEAD 3MM 4204-10SRT	2
PCB			
	4867-000110-002	HK670 POWER CONTROL BOARD REV B	1

"VOLUME" LED BOARD ASSEMBLY

Reference	Part Number	Description	Quality
	9467-015000-191	**HK670 LED LAMP BOARD ASSY REV A**	
CN1	2501-021301-150	2PIN 130MM2CONN CABLE AWG#28 2MMP IBOARD-IN(BLACK)	1
D1, D2	3100-000330-003	LED 3MM GREEN (LITON BIN3 RINK:PG)	2
	4867-000190-001	HK670 LED LAMP BOARD REV A	1

MOTOR VOLUME BOARD ASSEMBLY

Reference	Part Number	Description	Quality
	9467-015000-311	**HK670 VOLUME CONTROL BOARD ASSY REV A**	
Resistor			
R2	1001-001316-000	CARBON FILM RESISTOR 100 OHM 1/6 W +-5%	1
VR1	1065-003500-112	VOL. W/MOTOR 5OKAX2 +-20% 1/20W (ALPS)	1
Capacitor			
C1	1100-104044-000	CERAMIC CAP. 0.1uF/50V +-20%	1
Connector, Cable			
CN3	2300-002000-001	STRAIGHT CONN WAFER 2PIN 2MMP JST	1
CN1	2300-004000-002	STRAIGHT CONN WAFER 4PINS 2MMP JST	1
CN2	2511-060601-150	6P 60MM 2CONN S.CABLE AWG#28 2MMP1BOARD-IN(BLACK)	1
	2600-100154-000	3MM+15MM+3MM JUMPER WIRE AWT#26 UL1007 BLACK	2
PCB			
	4867-000310-002	HK670 VOLUME CONTROL BOARD REV B	1

MAIN POWER SWITCH BOARD ASSEMBLY

Reference	Part Number	Description	Quality
	9467-015001-171	**HK670 POWER SWITCH BOARD ASSY REV A**	
R1	1083-305312-000	CERAMIC PACKAGE RESISTOR 3.3M OHM +-5% 1/2W	1
C1	1110-103094-001	X-TYPE CAP.0.01uF/AC 250V +-20% MURATA KH103M	1
C2, C3	1110-104094-001	X-TYPE CAP 0.1UF 250VAC +-20% ECQU2A104ML	2
TR1	1801-501300-000	THREMAL RESISTOR 5D-13(WELTRONICS)	1
SW1	2401-010100-001	POWER SW 1P1T 250V/5A/TV3 (KNE-K14S2)	1
F1, F2	2612-102702-000	270MM DOUBLE INSULATED WIRE AWG#22 UL1672(BLACK)	2
L1	4001-780000-000	COLL TOROID TC2006-6R8M-H	1
	4867-000170-103	HK670 POWER SWITCH BOARD REV C	1
AC1, AC2, F1, F2, T1, T2	6600-042304-000	EYELET 2.3X4MM	6

VOLUME KNOB LED BOARD ASSEMBLY

Reference	Part Number	Description	Quality
	9467-015001-191	**HK670 VOLUME LAMP BOARD ASSY REV A**	
CN1	2501-021501-170	2PIN 150MM 2CONN RAINBOWWIRE AWG#32 2MMP 1BOARD-IN	1
D1	3100-000330-003	LED 3MM GREEN (LITON BIN3 RINK:PG)	1
	4867-000190-101	HK670 VOLUME LAMP BOARD REV A	1

SPEAKER SELECT SWITCH BOARD ASSEMBLY

Reference	Part Number	Description	Quality
	9467-015000-171	**HK670 SPEAKER SELECT BOARD ASSY REV A**	
Resistor			
R1, R2	1008-201316-000	CARBON FILM RESISTOR 820 OHM 1/6 W +-5%	2
Switch, Connector			
SW1, SW2	2402-020200-005	PUSH SLIDE SWITCH 2P2T PS-22F08	2
CN1	2501-060801-151	6PIN 80MM 2CONN CABLE AWG#28 2MMP 1BOARD-IN(BLACK)	1
PCB, Misc			
	4867-000170-001	HK670 SPEAKER SELECT BOARD REV A	1
	6567-150006-000	HK670 HEADPHONE BRACKET	1
	7002-604010-111	SCREW M2.6X4 M/C TYP B/H BLK	2
	7003-006001-111	SCREW M3X6 S.T.P. B/H (BLACK)	2

REMOTE LINK, DIGITAL IN/OUT BOARD ASSEMBLAY

Reference	Part Number	Description	Quality
	9467-015000-291	**HK670 DIGITAL CONTROL BOARD ASSY REV A**	
Resistor			
R904	1001-001316-020	CARBON FILM RESISTOR 100 OHM 1/6W +-5% AXIAL TAPE	1
R908	1001-004316-020	CARBON FILM RESISTOR 100K OHM 1/6W +-5% TP52	1
R907	1002-701316-020	CARBON FILM RESISTOR 270 OHM 1/6W +-5% AXIAL TAPE	1
R906	1003-902316-020	CARBON FILM RESISTOR 3.9K OHM 1/6W +-5% AXIAL TAPE	1
R901, R902	1004-700316-020	CARBON FILM RESISTOR 47 OHM 1/6W +-5% TP52	2
R903	1004-703316-020	CARBON FILM RESISTOR 47K OHM 1/6W +-5% TP52	1
Capacitor			
C906	1100-102045-000	CERAMIC CAP. 0.001UF/50V +80% -20%	1
C904	1100-681043-000	CERAMIC CAP. 680PF/50V +-10%	1
C903	1102-100044-000	ELECT. CAP. 10UF/50V +-20%	1
C902	1102-101024-000	ELECT. CAP. 100UF/25V +-20%	1
C901	1102-470024-000	ELECT. CAP. 47UF/25V +-20%	1
Transistor, Diode			
Q902, Q903, Q904, Q905	1300-100300-100	TRANSISTOR NPN KSR1003 (SAMSUNG)	4
Q901	1301-200300-100	TRANSISTOR PNP KSR2003 (SAMSUNG)	1
D901, D902, D903, D904, D905, D906	1401-141480-010	DIODE 1N4148 TAPE	6
Connector, Jack			
J901, J902	2321-003911-002	MIC JACK 3.5MM JY-3510-01-010	2
J903, J904	2330-004990-000	RCA JACK 4PIN RCA-214 (ORANGE) GOLD	2
CN901	2501-060801-151	6PIN 80MM 2CONN CABLE AWG#28 2MMP 1BOARD-IN(BLACK)	1
Relay			
RL901, RL902, RL903	4050-000005-002	RELAY ME-2-5 DC 5V GS-SH-205T 120ohm	3
IC			
U901	4181-700010-000	I.C. LTV817B LITON	1
PCB			
	4867-000290-001	HK670 DIGITAL CONTROL BOARD REV A	1

HK670 MAIN UNIT MECHANICAL PART LIST

Part Number	Description	Quality
9667-015000-001	**HK670 230V VDE ASSY (HARMAN KARDON HK670)EMC+LVD,A**	
2503-165006-690	16PIN 500MM FLAT CABLE 1MMP	1
2511-023201-150	2PIN 320MM 2CONN SHIELD CABLE AWG#28 2MMP(BLACK)	1
2511-027201-150	2PIN 720MM 2CONN SHIELD CABLE AWG#28 2MMP(BLACK)	1
2511-046601-150	4PIN 660MM 2CONN SHIELD CABLE AWG#28 2MMP(BLACK)	1
2610-220009-004	2000MM AC CORD VDE HO5VV-F 2GX1.0MM2	1
3200-307541-400	TRANSFORMER 230V VDE 0696V3075TM4 (NGAI CHEONG)	1
4002-311975-000	TOROID COILS 'T31X19X7.5MM'	1
4030-315250-000	FUSE T3.15A L 250V SLOW BLOW	1
4031-000002-000	FUSE HOLDER FH-B02	1
5110-671500-100	TRANSFORMER "HARMAN/KARDON" UL LABEL GOLD/BLACK	1

6029-010012-001-01	PLASTIC FOOT (HOT STAMPING)	4
6067-150002-000-01	HARMAN KARDON HK-670 DISPLAY LENS (W SILKSCREEN)	1
6067-150004-000-01	POWER BUTTON (GOLD) WITH SPRAT (BLK)	1
6067-150006-000-01	BALANCE KNOB (BLACK) WITH SPRAY	3
6067-150012-001	HK670 DIFFUSION SHEET A	1
6067-150013-001	HK670 DIFFUSION SHEET B	1
6067-150014-001	HK670 DIFFUSION SHEET C	1
6067-150015-001	HK670 DIFFUSION SHEET D	1
6067-150016-001	HK670 KNOB CORK	8
6567-150001-000-01	HK670 BOTTOM CABINET WITH BLALK SPRAY INSIDE	1
6567-150002-000-01	TOP COVER (BLACK) WITH DOUBLE SIDE SPRAY	1
6567-150003-000-02	HARMAN KARDON HK670 REV.1 230V R/P W/SILKSCEER	1
6567-150004-000-01	HK670 SHIELD-PLATE WITH BLACK SPRAY	1
6567-150005-000-01	HK670 HEAT SINK MOUNTING PLATE WITH BLACK SPRAY	2
6567-150007-000	HK670 PCB BRACKET	2
6567-150009-000-01	GROUND SHEET Ni-PLATED	1
6583-810004-000	HARMAN KARDON LOGO BADGE	1
6600-070003-000	CD90R05 RUBBER PAD,LEG	4
6600-104001-000	HEAT SHRINK TUBE 40MM DIA L=95MM	1
6600-120050-100	NUT M5	4
6600-180017-000	AC CORD BUSHING SB5R-5	1
6600-200002-000	HK670 DOUBLE SIDE TAPE B	1
6600-200003-000	HK670 DOUBLE SIDE TAPE C	1
6600-200004-000	HK670 DOUBLE SIDE TAPE D	1
6600-200005-000	HK670 DOUBLE SIDE TAPE E	1
6600-210097-000	SPONGE PAD A 104X6.5X5.0t FOR PREVENTTING SHOCKING	2
6600-210098-000	SPONGE PAD B 240X6.5X3.0t FOR PREVENTTING SHOCKING	2
6600-990023-000	GROUND TERMINAL	1
7003-006001-001	SCREW M3x6 S.T.P BW/H (BLACK)	2
7003-006001-001	SCREW M3x6 S.T.P BW/H (BLACK)	4
7003-006001-111	SCREW M3X6 S.T.P. B/H (BLACK)	39
7003-006001-113	SCREW M3X6 S.T.P B/H NI-PLATED	4
7003-006010-111	SCREW M3X6 M.C. B/H, BLK	19
7003-008001-111	SCREW M3X8 S.T.P. B/H BLK	8
7003-008002-111	SCREW M3X8 P.T.P. B/H (BLACK)	14
7003-014010-111	SCREW M3X14 M/C TYPE B/H BLK	4
7005-012010-112	SCREW M5X12 M/C TYPE B/H ZN-PT	4
7105-008512-053	SPRING LOCK WASHER (METAL) 5X8.5X1.2 NI-PLATED	4
7105-215010-022	METAL WASHER 5.2X15X1.0 MM ZN	4
9467-015000-071	HK670 POWER SUPPLY BOARD ASSY REV A	1
9467-015000-091	HK670 RIGHT CHANNEL POWER AMPLIFIER ASSY REV A	1
9467-015001-091	HK670 LEFT CHANNEL POWER AMPLIFIER ASSY REV A	1
9467-015001-171	HK670 POWER SWITCH BOARD ASSY REV A	1
9467-015000-291	HK670 DIGITAL CONTROL BOARD ASSY REV A	1
9467-015000-571	HK670 I/O BOARD ASSY REV A	1
8567-015000-301	**HK670 FRONT PANEL ASSY (HARMAN KARDON HK670) REV A**	
6067-150001-000-01	HARMAN KARDON HK-670 F/P (W PRINTED)	1
6067-150003-000-01	VOLUME KNOB (BLACK) WITH SPRAY	1
6067-150005-000-01	SPEAKER BUTTON (BLACK) WITH SPRAY	2
6067-150007-000-01	CONTROL BUTTON(GOLD)WITH(BLACK)SPRAY AND SILKSCEEN	1
6067-150008-000-01	HK670 VOLUME LED WITH MILK SPRAY	1
6083-810014-000-01	BUTTON STANDBY, PAINTED	1
6083-810015-000	INDICATOR, STANDBY SAN(MILKY)	1
6600-210098-000	SPONGE PAD B 240X6.5X3.0t FOR PREVENTTING SHOCKING	0.25
7003-006002-111	SCREW M3X6 P.T.P. B/H (BLACK)	1
7003-008002-111	SCREW M3X8 P.T.P. B/H (BLACK)	16
9467-015000-021	HK670 HEADPHONE JACK BOARD ASSY REV A	1
9467-015000-041	HK670 KEY CONTROL BOARD ASSY REV A	1
9467-015000-111	HK670 POWER CONTROL BOARD ASSY REV A	1
9467-015000-171	HK670 SPEAKER SELECT BOARD ASSY REV A	1
9467-015000-191	HK670 LED LAMP BOARD ASSY REV A	1
9467-015001-191	HK670 VOLUME LAMP BOARD ASSY REV A	1
9467-015000-311	HK670 VOLUME CONTROL BOARD ASSY REV A	1
9467-015000-561	HK670 TONE CONTROL BOARD ASSY REV A	1

HK670 PARKING MATERIAL

Part Number	Description	Quality
9767-015000-001	HK670 PACKING ASSY (HARMAN KARDON HK670) REV A	1
2617-210004-001	3.5MM MIC CABLE 2CONN 1000MM AWG#26 UL2468	1
4090-150001-000	AA ALKALINE BATTERIES	2
5000-671500-100	POLYFOAM LEFT	1
5000-671500-200	POLYFOAM RIGHT	1
5013-671500-000-02	HARMAN KARDON HK670 REV.1 230V CARTONBOX W/PRINTED	1
5100-671500-100	HARMAN KARDON HK670 I/B REV.1	1
5110-671500-200	HK-670 CARTON LABEL 4.5X2.5 CM	2
5110-838000-000	INSTRUCTION LABEL	1
5113-000000-000	SERIAL NUMBER LABEL, BLANK (6.5X35.5MM)	2
5113-000000-000-24	MANUFACTURE DATE CODE LABEL FOR HK-670 (230V)	1
5113-838000-000-04	HK670 S/N BAR CODE LABEL (YC0012-01001)	3
5200-100180-030	POLYBAG FOR AUDIO CORD	1
5200-230321-030-01	POLYBAG FOR ACCESSORIES (FL8350/FL8550)	1
5200-600600-040-03	POLYBAG FOR UNIT (FL8350/FL8550)	1
5206-500160-050	E.P.E. SHEET P-EP500160-05	1

HK670 REMOTE UNIT PART LIST

REMOTE UNIT MECHANICAL PART LIST

Part Number	Description	Quality
9805-020000-081	**REMOTE UNIT (RT02) W/30 KEYS FOR HK670 REV A**	
5200-080250-030	POLYBAG 80X250X3C MM	1
6002-000001-000-21	HK670 RT-02 ROMOFE TOP-COVER WITH SILKSCREEN	1
6002-000002-000	RT02-P002 CASE BOTTOM	1
6002-000003-001	RT02-P003 COVER BATTERY	1
6003-000001-000-34	HK670 REMOTE INLAY WITH SILKSCREEN	1
6600-010156-002	CONTACT BATTERY, COMMON	1
6600-010157-000	RT02-S002 CONTACT BATTERY POS	1
6600-010158-001	CONTACT BATTERY, NEGATIVE	1
6600-070007-000	RT-03 KEY PAD W/32 KEY	1
7002-008002-021	SCREW M2X8 P TYPE P/H BLK	1
9467-015000-081	HK670 REMOTE BOARD ASSY REV A	1

IR REMOTE BOARD ASSEMBLY

Reference	Part Number	Description	Quality
	9467-015000-081	**HK670 REMOTE BOARD ASSY REV A**	
Resistor			
R2	1001-800316-000	CARBON FILM RESISTOR 18OHM 1/6W +-5%	1
R1	1003-001316-000	CARBON FILM RESISTOR 300 OHM 1/6W +-5%	1
Capacitor			
C1	1100-104044-000	CERAMIC CAP. 0.1uF/50V +-20%	1
C2	1102-101114-000	ELECT. CAP. SMALL 5MML 100UF/6.3V +-20%	1
C3, C4	1181-300042-000	CERAMIC CAP. 30PF/50V +-5% NPO	2
IC, Transistor, Diode			
Q1	1300-212000-100	TRANSISTOR NPN C2120Y TO-92	1
D1	3101-333000-000	INFRARED LED IR333C/HO	1
U1	4205-670000-600	HK670 REMOTE MCU UPD64A (NEC)	1
PCB, Misc			
X1	1602-364002-000	CERAMIC RESONATOR 3.64MHZ +-0.5%	1
	4867-150080-001	HK670 REMOTE BOARD REV A	1